CLAIMS:

1. An electronic device comprising an array of micro-electromechanical system (MEMS) elements, said array providing a plurality of states at its output, wherein the MEMS elements each have a first state and a second state, and wherein a transition from the first to the second state is effected by an opening voltage, and a transition from the second to the first state is effected by a closing voltage, and the array comprises an input for a single control voltage that is applied to all the MEMS elements whereby the various states of the array are to be obtained by varying the single control voltage.

2. An electronic device as claimed in Claim 1, characterized in that the MEMS elements each have a characteristic hysteresis curve, such that the opening voltage is different from the closing voltage, which characteristic hysteresis curves and the corresponding opening and closing voltages differ from one MEMS element to another MEMS element.

3. The device of claim 1, wherein the MEMS elements in the array are connected in parallel.

4. The device of Claim 1, wherein the number of MEMS elements in the array is in the range from 2 to 10.

5. The device of Claim 1, wherein the input for a single control voltage is a transistor.

6. The device of Claim 1 comprising a plurality of arrays of MEMS elements, each array having an input for a single control voltage.

7. The device of Claim 1, wherein each of the MEMS elements in the array has a fixed electrode and a movable electrode that is movable towards and away from the fixed electrode by application of the closing and the opening voltage respectively, such that in the

first state the distance between the fixed and the movable electrode is smaller than in the second state, which movable electrode is suspended substantially parallel to the fixed electrode and anchored to a support structure by at least one cantilever arm having a spring constant, which MEMS element is provided with an actuation electrode with an actuation area for provision of the closing and opening voltages.

8. The device of claim 2, wherein a first and a second MEMS element in the array have different characteristic hysteresis curves in that actuation areas of the control electrodes of the first and second MEMS element are different and/or the spring constants of the cantilever arms are different.

9. The device of claim 7, wherein

- at least one dielectric layer having a dielectric permittivity is present between the fixed and the movable electrode, such that the MEMS element is a MEMS capacitor, of which capacitor the first state has a first state capacitance, and
- a first and a second MEMS capacitor in the array have different characteristic hysteresis curves in that the first state capacitances of the first and the second MEMS capacitor are different.

10. The device of claim 2, wherein the characteristic hysteresis curves differing from one MEMS element to another MEMS element by their individual width are designed such that the hysteresis curve having a smaller width is located fully within the width of the hysteresis curve having the next-larger width.

11. The device of claim 2, wherein the characteristic hysteresis curves of the MEMS elements are centered around a common centerline in the operational diagram.

12. Method for driving an array of micro-electromechanical system (MEMS) elements according to any of the preceding Claims, wherein a single control voltage is applied in common to the MEMS elements in the array, which voltage is varied to obtain the various states of the array.